

## REMARKS

This is intended as a full and complete response to the Final Office Action dated December 17, 2003, having a shortened statutory period for response set to expire on March 17, 2004. Claims 1-18 are pending in the application. Claims 2, 5, 7, 8, 9, 10, 11, and 18 have been cancelled. Claim 19 has been added. Please reconsider the claims pending in the application for reasons discussed below.

### **Claim Amendments**

Claim 1 has been amended to include the limitations of claims 2 and 10. Further, claim 13 has been amended to include the limitations of claim 18. Additionally, claims 3 and 6 have been amended to correct informalities. Applicant respectfully requests the amendments be entered.

### **Rejections Under 35 U.S.C. § 102**

Claims 1-7, 9, and 11-15 stand rejected under 35 U.S.C. § 102(e) as being anticipated by *Porter*, U.S. Patent 6,239,433. The Examiner states *Porter* discloses an apparatus and method for generating an image of the infrared radiation emitted from a particular viewing region, in order to detect the presence of a flame or fire in that region and to actuate an alarm system when the characteristics of the fire or flame are not consistent with the predetermined conditions.

Applicant respectfully traverses the rejection. *Porter* discloses the system for detecting a flame in a viewed area with maximum effectiveness for discerning between a flame and another hot object in the viewed area, and does this by using two arrays by working on a pixel to pixel cluster to cluster basis, thereby enabling it to analyze several sources very accurately. However, *Porter* does not teach, show, or suggest a flame detection apparatus comprising a focused array based sensor responsive to radiation having a predefined wavelength for generating an image of the infra-red radiation emitted within a viewing region, means for measuring the spectral ratio of the intensity of radiation having a first wavelength emitted within the viewing region to the intensity of radiation having a second wavelength emitted within the region, wherein the means for measuring the spectral ratio includes an unfocussed volumetric sensor which measures infrared radiation emitted within the viewing region having said second wavelength, processing means which analyzes

the outputs of said image generating and spectral ratio measuring means for responses indicative of the presence of a flame and a second focused array based sensor responsive to radiation having a predefined wavelength which is different from that of said first focused array based sensor, as recited in amended claims 1-7, 9, 11, and 12.

Furthermore, *Porter* does not teach, show, or suggest a method of detecting a flame comprising the steps of measuring the intensity of radiation having a first wavelength within a monitored region, measuring the intensity of radiation having a second wavelength within the monitored region, calculating the spectral ratio of the intensity of the radiation having the first wavelength to the intensity of the radiation having the second wavelength and comparing it to a predefined threshold value indicative of the presence of a flame, generating an image of the infra-red radiation within the monitored region, analyzing the image for features indicative of the presence of a flame within the monitored region, and activating an alarm if the results of a spectral ratio analysis and the image analysis fit a predefined profile indicative of the presence of a flame and measuring the intensity of at least one of the short wavelength radiation and visible radiation within the monitored area and analyzing the profile thereof for characteristics indicative of a non-flame radiation source, as recited in amended claims 13-15. Therefore, Applicant believes claims 1-7, 9, and 11-15 are in condition for allowance, and respectfully requests allowance of the same.

### **Rejections Under 35 U.S.C. § 103**

Claims 1-11 and 13-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Porter* and further in view of *Nakauchi, et al.* (U.S. Patent 4,179,606). Further, claims 16 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Porter* and further in view of *Ganeshan* (U.S. Patent 6,278,374). Additionally, claims 12 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Porter* and further in view of *Castleman* (U.S. Patent 6,518,574).

Statement Of Common Ownership:

The pending application serial number 10/071,589, and U.S. Patent 6,239,433 (Porter) were, at the time the invention of the '589 application was made, jointly owned by or subject to an obligation of assignment to Infrared Integrated Systems, Ltd.

Applicant submits that the *Porter* reference may not be used as a reference to preclude patentability for obviousness pursuant to 35 U.S.C. § 103(c), which states:

Subject matter developed by another person, which qualifies as prior art only under [35 U.S.C. § 102(e)], shall not preclude patentability under this section [35 U.S.C. § 103] where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Since the subject matter of *Porter* and the subject matter claimed in the present invention were both owned by a common entity at the time the invention of the present application was made, *Porter* is disqualified as prior art for the purpose of rendering Applicant's claims unpatentable for obviousness. See MPEP § 706.02(I)(1)-(3). Specifically, the present application and *Porter* were, at the time the invention was made, owned by Infrared Integrated Systems, Ltd. Further, this present application claims priority to GB 0103632.6 filed on February 14, 2001 and to GB 0105111.9 filed on March 1, 2001. Pursuant to MPEP 706.02(I)(2)(II), this assertion, which Applicant conspicuously states above, constitutes "sufficient evidence" by Applicant to disqualify *Porter* as prior art under 35 U.S.C. § 103. Therefore, *Porter* may not be used as prior art to render Applicant's claims obvious.

New Claim


Claim 19 (a combination of previously presented claims 1, 2, 5 and 8) has been added. Applicant submits that no new matter was added. Furthermore, Applicant believes that the references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention disclosed in new claim 19. Therefore, Applicant believes new claim 19 is in condition for allowance, and respectfully requests allowance of the same.

### CONCLUSION

The references cited by the Examiner, alone or in combination, do not teach, show, or suggest the invention as claimed.

Having addressed all issues set out in the Final Office Action, Applicant respectfully submits that the claims are in condition for allowance and respectfully request that the claims be allowed.

Respectfully submitted,



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